

AGENEWTECH

M293GO

Smart Module Specification_V1.0



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About the Document

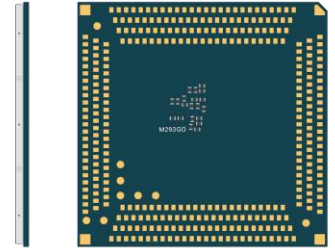
History

Version	Data	Author	Description
-	2023-09-22	Ma Yuxin	Initial
1.0	2023-09-22	Ma Yuxin	Controlled Copy

M293GO

Multi-network Smart 5G module

Supports Wi-Fi & BT



M293GO is a multi-network smart 5G module based on MediaTek Octa-core(2*ARM Cortex-A78+6*ARM Cortex-A55) 6nm processor MT8791T launched by Suning Smart Devices Co.,Ltd, which is equipped with Android 13 operation system. It has powerful performance, neon engine processing, 2D/3D graphics acceleration processing capability, and fully meets customer's demands for high speed and multimedia functions in industrial and consumer applications.

M293GO supports full coverage of all network systems, WI-FI 802.11a/b/g/n/ac/ax and BT5.2 near-field wireless communication. In addition, M293GO also has audio and video input and output interfaces and rich GPIO interfaces. It also supports a variety of audio and video codecs. The home screen supports up to FHD+ 1080*2520 at most. At the same time, M293GO supports GPS, GLONASS, Beidou and Galileo positioning systems making its positioning function fast and accurate.

M293GO is a patch module with a total of 410 pin, all of which are LGA pins. The size is 47.0mm×48.0mm×2.6mm, which can be embedded in various M2M production applications through pads, making it widely used in smart cash registers, smart POS, tax control machines, security monitoring, vehicle equipment, and high-end information collection equipment, smart robots, smart homes, smart hardware, industrial smart handheld devices, drones, high-end police or law enforcement equipment, smart intercom devices, smart wearables, vending machines, logistics cabinets and other equipment are used in different industries.



Main Advantages

- ✓ Comprehensive coverage of multi-network standard
- ✓ Support Wi-Fi 802.11a/b/g/n/ac/ax and BT5.2 short-range wireless communication
- ✓ Support GPS+GLONASS+Beidou+Galileo and other standard satellite positioning; Support L1+L5 frequencies
- ✓ Support multiple audio and video codecs
- ✓ The main screen supports up to FHD+1080*2520 @120Hz
- ✓ Support 4K@30fps video recording and playback
- ✓ Possess audio and video input and output interfaces and rich GPIO interfaces
- ✓ Built-in AI unit, support 2T computing power



2*ARM Cortex-A78
+6*ARM Cortex-A55
64-bit processor (Octa-core)



IEEE 802.11
a/b/g/n/ac/ax



Android 13



GPS+GLONASS+Beidou+Galileo



Multimedia
processing engine



Bluetooth 5.2

5G NR	M293GO
Region/Operator	China/India/Europe/America/Australia
Operating System	Android 13
Memory	64GB UFS + 4GB LPDDR4X (Default)
Module size (mm)	47.0 × 48.0 × 2.6
Packaging	LGA
Temperature Range	
Operation Temperature	Operating temperature range: -20 °C ~ + 80 °C Storage temperature range: -40 °C ~ + 90 °C
Frequency Information	
NR	N1/N3/N5/N7/N8/N20/N28/N38/N41(PC2)/N77/N78/N79
LTE-FDD	B1/B2/B3/B4/B5/B7/B8/B20/B28full/B66
LTE-TDD	B34/B38/B39/B40/B41(2496-2690)/B42/B43
WCDMA	B1/B2/B5/B8
CDMA	BC0/BC1
GSM/EDGE	B2/B3/B5/B8
WLAN	2.4/5GHz, 802.11 a/b/g/n/ac/ax
Bluetooth	Bluetooth 5.2
GNSS	GPS + GLONASS + Beidou + Galileo
Authentication	
Operator Certification	TBD
Compulsory Certification	TBD
Other Certifications	TBD
Data Transfer Rate	
NR-FDD	800Mbps (DL) /200Mbps (UL)
NR-TDD	2.3 Gbps (DL) /625Mbps (UL)
LTE-FDD (DL CA)	1.2Gbps (DL) /75Mbps (UL)
LTE-TDD (DL CA)	600Mbps (DL) /45Mbps (UL)
DC-HSPA+	42Mbps (DL) /11.2Mbps (UL)
WCDMA	384Kbps (DL) /384Kbps (UL)
EDGE	236.8Kbps (DL) /236.8Kbps (UL)
GPRS	85.6Kbps (DL) /85.6Kbps (UL)
Outstanding Characteristics	
NR-FDD Bandwidth (MHz)	5/10/15/20/30/40
NR-TDD Bandwidth (MHz)	10/15/20/40/50/60/80/90/100
LTE Bandwidth (MHz)	1.4/3/5/10/15/20
DL supports MIMO 1 × 4	•
SIM Card Detection	•
Dual SIM Dual Standby	•
USB Firmware Upgrade	•
OTA Firmware Upgrade	•

5G NR	M293GO
Electrical Specification	
Operating Voltage	3.4~4.5 V, typical 3.8 V
Power Consumption (typical)	TBD
Interface	
LCD	4-lane MIPI DSI, Resolution up to FHD+ 1080*2520@120fps
Camera	3 4-lane MIPI CSI, support 20MP+20MP@30fps dual camera
Scanner Lens	2 2-lane MIPI CSI
TP	Capacitive touch screen
Audio	Lineout interface, receiver, earphone 3 channels of analog microphones + 2 channels of digital microphones
USB	USB 2.0, USB3.1, Support OTG
(U)SIM	2 sets (1.8V/3.0V)
UART	2 sets of UART for debugging and applications
SD Card	Support SD card (SD3.0)
ADC	8 sets of ADC interfaces, 2 of which are dedicated to battery ID detection
I2C	10 sets of I2C interfaces for TP, camera, sensor and other peripherals
SPI	5 sets of SPI interfaces, the module can only be the main device. One sets of the SPI interfaces can be multiplexed as an I2S interface
PWRKEY	Internally pull up to VBAT
GPIO	28 GPIO dedicated interfaces and 6 general GPIO ports are reserved
ANT	Main antenna, Diversity antenna, GNSS antenna, Wi-Fi 2.4G&Bluetooth antenna, Wi-Fi 5G antenna

Remarks: 1.*:In progress

2.●:Supports